Rip Rap Pit - Island No. 5
"Estimate Book"

LEVEL BOOK

27

14.113.0032

No 26

No. 37460
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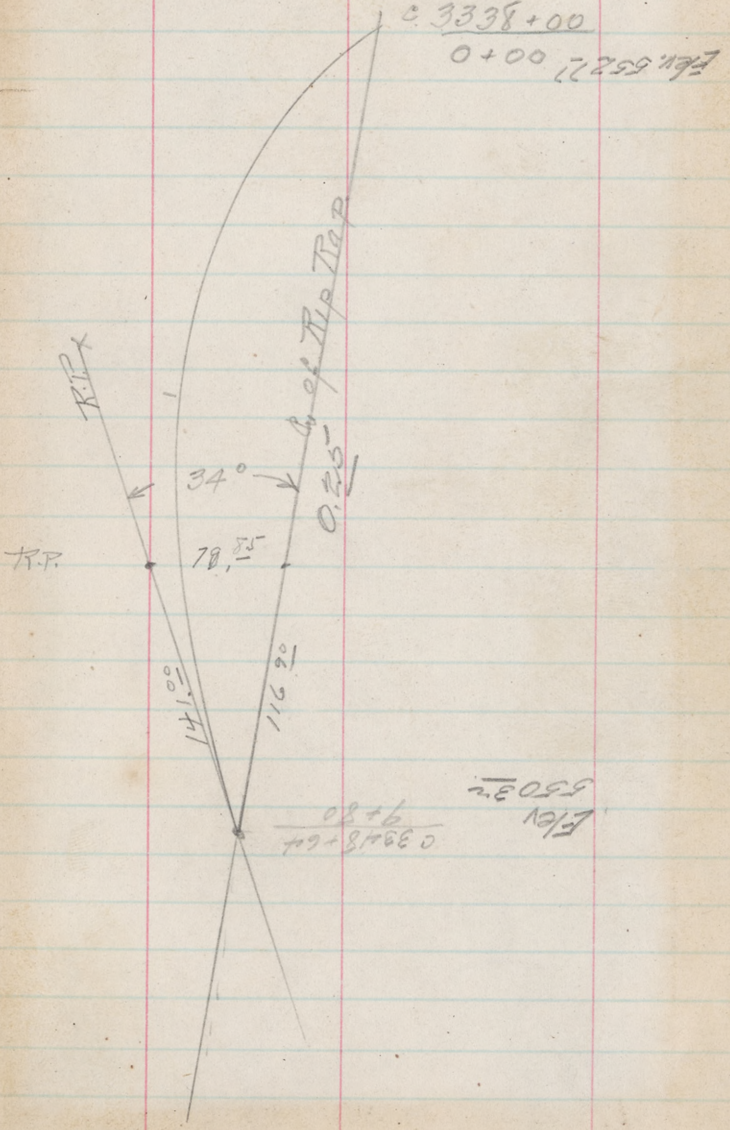
763
6+62

51 43
48+64d
2.79

9+80
1 169
7+63 1



5+75

+50

+25

5+00

4+75

4+50

4+25

4+10

8+90

Dec. 1. 1915

Taken Dec. 1 1915

Same as Dec 1. 1914

+ 24 7/8 + 12° + 0° + 0°
80 90 95 162

+ 25 2/8 + 0° + 0°
100 103 160

+ 28 2/8 + 0° + 0°
100 114 170

+ 31° + 0° + 0°
100 110 192 5/8

+ 33 4/8 + 0° + 0°
100 110 170

+ 28 5/8 + 21° + 6 3/8 + 0° + 0°
95 100 110 113 164°

+ 27° + 0° + 0°
100 115 168°

Same as Dec. 1. 1914

7+50		0° 12½°		
+65				
+38				
+24	L	0° 47°		
9+00				
+75	L	0° 25		
+50	L	0° 17°		
+25	L	0° 5°		
8+01	R	0° 9°		
+75				
+50	R	0° 19		0° 19
+25				0° 30
7+00	R	0° 40°	0° 14½ 40 30	+2 2

Dec. Est. 1915

Taken Jan 3. 1916 T.W.

0° 0° + 15° 71°
70 80 100

0° 0° + 23° + 31°
60° 68° 83°

0° 0° + 17° + 25° + 32° ✓
47° 50 60 70°

0° 0° + 10° + 30° + 50° 41° ✓
37° 40 45 57° 58°

0° 0° + 19° + 42° ✓
25° 34 50°

0° 0° + 19° + 36° ✓
20 20 30 40

0° 0° + 12° + 29° + 47° ✓
10° 20 36 40

0° + 7° + 23° + 41° ✓
9° 10 20°

0° + 7° + 19° 38° ✓
10° 10 20

0° + 18° + 38° 41° ✓
19 10 10

0° + 26° + 41° 42° 48° ✓
30 20 10 10°

+ 26° + 36° + 46° + 46° ✓
20 10° 10°

+75			0° + 17.3 +		
			51 40		
+50		0° + 5.8 + 9.3	26.3		
		62 50 40	30		
+18		0° 23° 40°	60°		
		80 63° 48°	29		
5+75		00 + 7.8 + 17.5	29.5 43.5	62.3	
		90 80 70	60 46	40	
+50			0° 12.4		
			90 74		
5+25		Orig. Est. Sect.			

29^5 41^4 50^2 52^2 + 42^2 ✓
30 20 10 10

31^3 44^3 47^9 + 48^5 ✓
33 30 10 4

80^2 96^2 96^7
20 10 4

78^4 91^4 97^5 + 96^5
30 20 10 4

26^2 43^2
66^2 65^2

12+53		Toe 61°		
+33		64°		
12+03		72°		
+73				
+43				
11+13		75°		
10+93		77°		
9+80				
+65				
+38				
+24				
9+00				
+75				
+50				

Estimate for January 1916

Taken 2-5-16

			℄	
		+ 0°	0°	✓
		61°		
	18⁶ +	0°	+ 0°	✓
	76°	64°		
	19⁸ +	0°	+ 0°	✓
	84°	72°		
	19¹ +	0°	0°	✓
	85°	73°		
	19⁵	0°	0°	✓
	86°	74		
	18⁴ +	0°	0°	✓
	86°	75°		
	9° +	0°	0°	✓
	84°	77°		
		0° +	0°	✓
		150		
21° +	18⁵ +	0°	0°	✓
100°	90	80		
31° +	31³ +	0°	0°	✓
100°	83	78		
35° +	33¹ +	0°	0°	✓
100°	80	71°		
27⁹ +	27⁹ +	0°	0°	✓
84⁵	74⁵	64		
34⁶ +	35³ +	0°	0°	✓
70°	64°	54°		
51⁶ +	43⁶ +	0°	0°	✓
70°	60	44		

+25

8+01

7+75

+50

+25

7+00

+75

+50

6+18

5+75

Estimate for January 1916- Taken 2-5-16

$49\frac{1}{60} + 45\frac{4}{50} + 0\frac{0}{37} \quad 0$ ✓

$49\frac{3}{60} + 48\frac{1}{50} + 0\frac{0}{31} \quad 0$ ✓

$38\frac{5}{20} + 0\frac{0}{10} \quad 0$

$41\frac{3}{20} + 18\frac{6}{10} \quad 0$

$0\frac{0}{20} \quad 16\frac{4}{10} \quad 34\frac{5}{10} + 48\frac{8}{10}$

$46\frac{1}{10} + 20\frac{5}{10} + 0\frac{0}{22} + 0\frac{0}{40}$

$52\frac{0}{10} + 0\frac{0}{20} + 28\frac{3}{31} + 0\frac{0}{51} \quad 0$

$48\frac{5}{20} \quad 27\frac{4}{40} \quad 0\,0$

$74\frac{5}{6} + 60\frac{5}{30} + 31\frac{6}{60} + 20\frac{4}{80} + 8\frac{0}{92} + 0\,0$

Same as Dec. 1915.

Feb Estimate 1916 - Taken

5700
5700
+25
+50
+75
6418

79 79
5 44
7 30

Feb. 25-1916.

Pyr-back to 4+75

30.5 + 0.0
60 80
396 + 6.5 + 0.0
60 70 80
532 + 5.0 + 0.0
50 70 80
435 + 11.5 + 0.0
46.0 60 70
41.6 41 0.0
30 55 65.0

Pyr ahead 66+50

9+80

+50

9+00

+25

+50

+25

8+01

+75

+50

+25

7+00

+75

+50

09
36

March Estimate 1916.

Taken 3-28-16.

Same as Feb. 11916.

$0^{\circ}_{0} + 26^{5}_{34} + 52^{7}_{40^{\circ}}$

$0^{\circ}_{9^{\circ}} + 17^{6}_{10} + 40^{7}_{30} + 60^{6}_{40^{\circ}}$

$0^{\circ}_{17^{\circ}} + 23^{7}_{C} + 46^{1}_{10^{\circ}}$

$0^{\circ}_{24} + 18^{6}_{C} + 42^{0}_{10}$

$0^{\circ}_{36^{\circ}} + 16^{5}_{20} + 42^{7}_{0^{\circ}} + 55^{1}_{10^{\circ}}$

6+18				0° 48°
5+75				0° 54°
+50				0° 62°
+25				0° 17' 69° 50
5+00				0° 71°
+75				0° + 12' 74 60
+50				0° 11° 73° 59
+25				0° 6° 79° 70
4+10				0° 10° 79° 70
3+90				0° + 13° 73 65°
3+70				0° + 10 73° 70
3+41				0° + 70°
3+29				0° + 73
3+00	Same as last Cst.			

$16\frac{8}{30}$ $= 87\frac{6}{10} + 49\frac{4}{10} + 62\frac{5}{10}$

$45\frac{6}{30} + 72\frac{4}{15} + 96\frac{2}{0}=$

$18\frac{5}{50} + 75\frac{7}{20}°$

$+ 42\frac{5}{30} + 62\frac{7}{20}$

$+ 37\frac{3}{40}° +$

$27\frac{9}{50} + 39\frac{6}{40}°$

$+ 36°$
$50°$

$33°$
$62°$

$+ 32°$
$66°$

$+ 43°$
$60°$

$\frac{5}{}° + 43°$
$60°$

$25\frac{4}{50}$

$31\frac{3}{60}°$

Orig 1st Sect

9+65

+38°

+24

9+00

+75

+50

+25

8+01

+75

+50

+25

7+00

+75

31 + 0 + 0
100 96

35 + 0 + 0
100 80

27 3/5 + 0 + 0
94 64

36 6/7 + 0 + 0
77 60

51 6/7 + 0 + 0
70 57

50 2/3 + 0 + 0
70 48 6/7

57 3/7 + 25 3/7 + 0 + 0
70 53 37

45 + 0 + 0
40 20

59 3/7 + 26 5/7 + 0 + 0
50 34 10

64 4/7 + 42 3/7 + 19 4/7 + 0
60 40 20

47 2/7 + 0 + 0
30 17

53 6/7 + 20 5/7 + 8 5/7 + 0
20 10 7

6+50

~~+18~~

6+18

5+75

5+50

+25

5+00

+75

+50

+25

4+10

$58^{7} + 12^{2} + 00 \quad 00 \quad 00$
$20^{\circ} \quad 0 \quad 10^{\circ} \quad 36^{\circ}$

$62^{5} \quad 42^{\circ} + 21^{\circ} + 0^{\circ} + 0^{\circ}$
$10^{\circ} \quad 10 \quad 25 \quad 48^{\circ}$

$96^{2} + 72^{1} + 28^{1} + 0^{\circ}$
$15^{\circ} \quad 20 \quad 42^{\circ}$

$75^{7} + 33^{5} + 0^{\circ}$
$80 \quad 33^{\circ} \quad 42^{\circ}$

$62^{7} + 42^{5} + 0^{\circ} \quad 0^{\circ}$
$20 \quad 30 \quad 49^{\circ} \quad 69^{\circ}$

$49^{\circ} + 0^{\circ} \quad 0^{\circ}$
$30 \quad 55^{\circ} \quad 71^{\circ}$

$37^{\circ} + 0^{\circ}$
$30 \quad 56^{\circ}$

$39^{\circ} + 0^{\circ} + 0^{\circ}$
$30 \quad 59 \quad 73^{\circ}$

$44^{9} + 22^{\circ} + 0^{\circ} + 00$
$40 \quad 51^{\circ} \quad 60 \quad 79^{\circ}$

Orig Est. Section

7+00	75 6/70	+ 40 3/40	+ 10 0/16	00 C	
+75	68 2/50	+ 42 5/40	+ 16 4/20	+ 7 5/10	+ 3 1/C 00 7°
+50	69 1/50	+ 33 5/38	1 2/C 4	00 10	
6+18	72 5/30	+ 28 0/C	00 25		
+75	95 0/70	63 5/C	+ 28 1/30	+ 00 42	
+50	92 9/70	69 8/C	57 4/10	00 42	
5+25	Same as April.				
4+25	Same as last				
4+10			44 0/30	00 64	
+90			66 8/40	+ 00 65	
+70			54 0/50	00 66	
+41			25 4/50	00 60	
3+00	Any Fall Rec'd				

+80		00 125°		
+65		21° + 0° 100 94°		
+38		37° + 0° 115° 100		
+21		38.5 + 00 110 90		
9+00		36° + 0° 104.5 90°		
+75		36.6 + 00 77° 70		
+50		55.7 + 0° 80° 68°		
Month				
+25		55° + 00 80 61°		
8+01		57.3 + 0° 80° 50°		
+75		45.9 0° 50 32		
+50		62.7 + 18° + 00 60° 44° 30		
7+25		63.2 + 29° + 0° 0° 70° 40 20 C		

	Gr.	Elev		
+25			~~4~~	
+10			Orig. 44° 30	34.4 30
4	551.77			
+90			80° 20	36.9 30
+70		Orig.	77.2 20 + 72.2 23°	29.7 17
+50	551.90			
+41				27.5 30
+29	351.49		46 40	Orig. 35.4 38
3.	Sect Ahead.			
3	Sect 252.01	Back 554.4		
+75	252.07			
2+50	252.13	561.1		
2+23				
2+00	527			

~~00~~ 00 00
16 150 140

40.7 32.7 + 24.7 + 6.7 + 0.0 - 1.3 - 1.0 - 0.7 - 0.0 + 0.7 + 0.0 + 0.0
30 30 40 50 60 70 80 90 100 110 120 130

23.2 + 6.2 + 0.7 + 0.0 - 1.7 - 1.4 - 1.4 - 0.6 0.0
40 50 60 62 70 80 90 100 108.0

25.7 + 10.1 + 4.0 + 0.0 - 1.7 - 1.9 - 1.2 - 0.8 + 0.0
40 50 53 60 70 80 90 100 110

19.7 + 7.6 + 2.2 + 0.0 1.4 - 1.4 - 1.0 - 0.6 00
47.0 53 60 68 70 80 90 100 110.0 156

26.7 + 15.4 + 3.5 + 0.0 - 1.2 - 1.0 - 1.3 - 1.5 - 00
40 50 60 65 70 80 90 100 108.0

23.4 + 12.8 + 2.9 + 0.0 2.6 - 2.6 - 2.6 + 00
40 50 60 65 70 80 90 100

35.0 + 20.5 + 10.2 + 5.4 + 2.4 + 0.0
40 50 60 70 80 90

35.0 35.0 + 26.5 + 15.4 + 2.4 + 2.0 + 0.0
40 50 60 70 80 90 95

40.0 + 34.2 + 23.2 + 11.7 + 5.0 + 00
50 54.0 60 70 80 87.

31.4 + 31.0 + 20.7 + 11.0 + 0.0
40 50 60 70 86

28.7 20.1 13.1 + 6.5 + 2.5 + 0.0
40 50 60 70 80 83

Orig Sect.

0° 0° 0° 0°
30 20 10

0° 0° 0° 0°
40 30 20 10

1⁶ 1⁵ 0° 0°
30 20 10

0° 0° 0° 0°
40 30 20 10

0⁷ 0° 0° 0° 0°
40 30 20 10

0° 1⁴ 1° 1° 0° 0°
80 70 60 50 40

0⁸ 0° 1⁵ 0° 0° 0°
0 20 15 10 30

0° 0° 0° 0° + 1⁵ + 1⁸ + 0° + 0°
20 10 10 18 20 30 40

0⁹ 1⁴ 0° 1⁶ 0⁸ 0⁷ 0° 0° 0° 0°
20 10 10 20 30 40 50 53

1⁵ 1⁸ 0° 1⁶ 0⁴ 1⁴ 0° 0° 0° 0°
20 10 10 20 30 40 50 60 64

1⁴ 1⁵ 1⁸ 0° 1⁷ 0° 1² 1° 0° 0° 0°
20 10 10 16 23 30 40 50 60 76

2⁹ 1⁵ 1⁸ 1⁷ 0° 1⁶ 0° 1° 0⁷ 0° 0°
20 10 10 20 30 36 40 50 60 80

2⁸ 3¹ 2° 1⁵ 2⁷ 0° 2¹ 1³ 1² 1¹ 1° 0°
20 10 10 20 30 40 50 60 70 80 90

+65 Pyr. ahead.

+53 16^{8} 10^{1} + 1^{3} + 0^{0} + 0^{0} + 0^{0} +
73^{0} 70 60 55 50 40

+33 19^{6} + 7^{2} + 1^{4} + 0^{0} 0^{0} + 0^{0}
73 70 62 60 50 40

12+03 20^{9} + 6^{8} + 2^{4} + 0^{0} 0^{0} 0^{0} 0^{0}
86 80 70 66 60 50 40

+73° 23^{2} 13^{9} + 7^{1} + 0^{0} - 0^{6} - 0^{6}
98° 90 80 70 60 50

+ $0^0 + 0^5 + 0^0$ 00
30 20 10

0^0 $+ 0^0 + 0^8 + 0^0$ 00
0 30 20 10

0 0^0 0^0 0^0 00
0 30 20 10

6 0^0 0^0 0^0 00 00 ✓
0 40 30 20 10

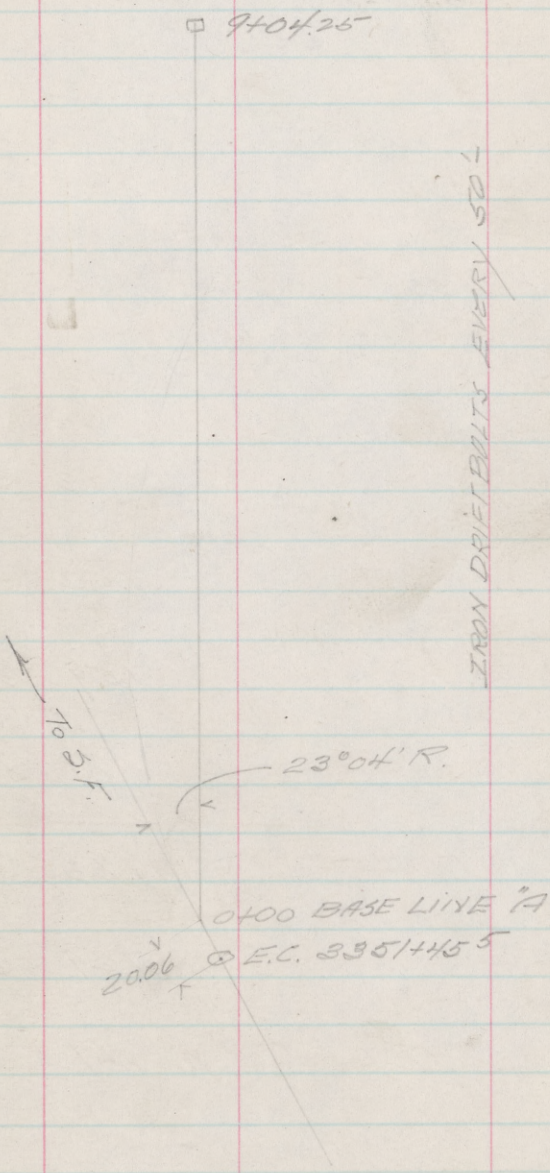
ISLAND MOUNTAIN
-RIP-RAP PIT-

- BASELINE -
3/19/17

A LINE	B LINE		Indexed to Date
		9+04.25 Cross in Rock	
9+04.25	1	8+34.50 Cross in Rock	
		7+20.72 Hub.	
		6+36.20 Nail	
		4+47.65 Cross in Rock	
		3+81.84 Cross in Rock	
	STAKE	2+00 Bolt	
0+00	BOLT	0+00 Bolt	

3-14-17 { WHIPPLE
UNDERHILL
TALLANT

-16-



BASE LINE "A"
RIP RAP AT ISLE MOUNT

	5.790			
		556.385		
TP	4.65		5.03	551.35
		556.00		
T.P	5.90		5.02	550.98
		556.88		
T.P. 0+00	5.48		5.36	551.52
		557.00		
0+50			5.89	551.11
1+00			6.23	550.77
+50			7.03	549.97
2+00			7.59	549.41
+50			9.01	547.99
3+00			7.83	549.17
+50			7.29	549.71
4+00			7.61	549.39
+50			7.74	549.26
5+00	8.12	557.22	7.90	549.10

— 17 — 3-16-17 { WHIPPLE UNDERHILL TALLANT

BM - Spike in Rock West End Tunnel at Isle M.
Elv 550.595

Elv. 0+00 Base Line "A"

5+00		557.22	—	548.94
+50			8.35	548.87
6+00			9.11	548.10
+50			7.84	549.38
6+99			7.02	550.20
+50			5.87	551.45
8+00			4.58	552.64
+50			4.68	552.55
9+04.25			4.45	552.77
	4.50			
		557.27	4.72	552.55

DIFFERENTIAL LEVELS
to Tunnel

9+04.25				552.77
	5.99	558.76		
			2.80	555.96
	5.79	561.16		
			4.60	
			556.55	556.55
	5.93	562.48		

	562.48		
5.83		3.90	558.58
	564.41		
7.85		1.25	563.16
	571.01		
30.8		12.85	558.16
	561.24		
0.40		14.74	546.50
	546.90		
0.91		13.71	533.19
	534.10		
		14.34	519.76

Top Shaft.

Top Hub 5' from Portal of Tunnel

BASE LINE "A"

	Fill	Cut	Grade Elev.	
0+00	~~.50~~	.50	551.00	551.52
+50		.11		551.11
1+0	.23			550.77
+50	1.0			550.00
2+0	1.6			549.40
+50	2.0			548.00
3+0	1.8			549.20
+50	1.9			549.7
4+0	1.6			549.4
+50	1.7			549.3
5+0	1.9			549.1
+50	2.1			548.9
6+0	2.9			548.1
+50	1.6			549.4
+99		0.50		550.2
7+50		1.5		551.5
8+0		1.6		551.6
+50		1.6		551.6
9+04.5		1.7		551.8

LEVEL to 9+04.5

Whipple 20

Corrected Elev	Grade			
550.70	549.0	+1.6	RHG 549.00	+1.1
550.29		+1.3		+1.3
549.95	549.0	+0.9		+1.0
549.18	549.2	0.0		+0.2
548.58	549.3	-0.8		-0.4
547.18	549.5	-2.3		-1.8
548.38	549.6	-1.3		-0.7
548.88	549.8	-1.0		-0.1
548.58	549.9	-1.4		-0.4
548.48	550.0	-1.5		-0.5
548.38	550.2	-1.9		-0.6
548.1	550.3	-2.2		-0.9
547.3	550.5	-3.2		-1.7
548.6	550.7	-2.1		-0.4
549.4	550.8	-1.4		+0.4
550.7	550.9	-0.2		+1.7
551.8	551.0	+0.8		+2.8
551.8	551.2	+0.6		+2.8
552.0	551.3	+0.7		+3.0

Corrected Grade by R.W.H. = 549 Level. Aug 20th 1917

CROSS SECTIONS
ISLE MOUNT QUARRY

32
240

1+50 ℄ 10 20 30 40
-1.0 -1.0 +6.2 +16.2 26.0

120 130 140 150 160 170
32.2 35.1 38.0 41.0 43.0 44.5

2+00 ℄ 10 20 30 40
-1.6 -1.6 +1.0 +23.6 28.6

120 130 140 150 160 170
39.0 41.6 40.0 42.8 46.0 50.5

2+50 ℄ 10 20 30 40
-3.0 -1.5 -1.5 -0.4 +4.8

120 130 140 150 160 170
44.1 47.8 46.0 52.0 50.2 52.0

3+0 ℄ 10 20 30 40
-1.8 -1.8 00 +5.0 +12.8

~~48~~
118 120 130 140 150 160
36.2 46.5 49.3 54.9 57.5 58.1

3+50 ℄ 10 20 30 40
-1.3 -2.3 -0.6 +4.1 +17.0

120 130 140 150 160 170
73.6 75.6 73.1 84.5 85.8 98.0

3-17-17 { WHIPPLE
UNDERHILL
TALLANT

21

50 60 70 80 90 100 110
27⅝ 27⅝ 24 26½ 27⅝ 31⅛ 30⅝

50 60 70 80 90 100 110
19⅝ 21⅝ 23⅝ 27⅝ 32⅝ 36⅝ 41⅝

50 60 70 80 90 100 110
+8⅜ +16 21⅜ 27⅛ 33⅛ 40⅝ 42⅛

50 60 70 80 90 100 110
26⅛ 36⅝ 42⅜ 50⅛ 50° 59¼ 57⅞

170
63.1

50 60 70 80 90 100 110
27⅜ 40⅜ 53⅞ 63⅜ 77⅝ 75⅚ 72⅝

"A" LINE

4+00 ℄ 10 20 30 40
-1.3 +2.3 -0.6 +4.7 +17.0

140 150 160 170
72.5 73.6 75.6 73.4

4+00 ℄ 10 20 30 40
-1.6 -0.6 +1.2 5.3 21.1

114 120 130 140 150 160
98.1 97.0 88.6 88.8 90.8 90.9

4+50 ℄ 10 20 30 40
-1.1 -1.0 -1.1 +3.2 +9.6

110 120 130 125 130
65.8 70.2 65.0 84.2 91.1

5+00 ℄ 10 20 30 40
-1.9 -0.4 -0.8 +1.4 +11.4

110 120 130 140 150
81.8 73.8 74.0 74.8 76.9

5+50 ℄ 10 20 30 40
-2.1 -2.0 -2.4 -1.1 +4.7

125°
64.8 120 130 140 150 160 170
74.8 68.3 76.8 79.6 85.8 94.8

3-18-17 { WHIPPLE
UNDERHILL
TALLANT

50 60 70 80 90 100
+27 40 51 63 77 75

150 160 170
84 83 98

50 60 70 80 90 100 110
29 39 45 56 64 72 77

170
100

50 60 70 80 90 100
+24 32 41 43 58 66

140 150 160 170
96 101 92 107

50 60 70 80 90 100
25 34 41 53 64 67

160 170
81 83

50 60 70 80 90 100 110
+18 +31 +48 55 66 70 73
+51

6+00 ℄ 10 20 30 40
-2.2 -2.9 -2.3 +0.1 +6.4

120 130 140 150 160
88.1 91.3 99.9 103.0 105.0

6+50 ℄ 10 20 30 40
-1.6 -1.0 +1.4 +0.1 +7.3

120 130 140 150 160 170
100.7 100.5 101.7 102.8 103.0 104.2

7+00 ℄ 10 20 30 40
+0.5 +1.0 +0.5 -0.1 +1.0

110 120 130 140 150
71.7 74.1 79.1 83.2 86.5

7+50 ℄ 10 20 30
+1.5 +1.1 +0.5 -0.7

100 110 120 130 140
47.2 47.3 49.4 52.4 56.9

8+00 ℄ 10 20 30 40
+1.6 +1.0 +0.4 +0.2 -0.6

110 120 130 140 150
41.8 43 51 72.0 70

50 60 70 80 90 100 110
+22 38 46 54 71 80 80

170
106

50 60 70 80 90 100 110
+25 65 79 76 81 100 101

50 60 61 70 80 90 100
+39 +23 31 31 41 53 60

160 170
88 89

40 50 60 70 80 90
+0 +0 +8 +15 27 38

150 160 170
62 68 71

50 60 70 80 90 100
00 +7 +2 +7 +18 37

160 170
60 57

Note 8+50 below

~~8+50~~ ℄ 10 20 30
8+34 +1.6 +2.4 +2.4 +1.6

90 100 110 120 130
8.4 10.1 Perpendicular

9+04.25 ℄ 10 20 30
+1.8 +1.9 +2.4 +2.5

100 110 120 130 140
+4.2 +6.4 15.5 20.2 23.2

8+50 ℄ 10 20 30
+1.8 +2.6 +2.4 +1.6

90 100 110 120
8.2 9.8 Straight up

40	50	60	70	80
+15	+03	00	50	61

140	150	160	170
81 2	80 6	77 2	72 6

This elevation from 8+00 170 feet out.

40	50	60	70	80	90
+23	+19	+07	+02	+04	+02

150	160	170	165
34'	53 0	57 3	67 0

40	50	60	70	80
+12	+06	10	60	82

130	140	150	160	170
	72 2	62	54	32

BM				550.595
	4.110	554.705		
			3.288	551.417
			3.685	551.020
	4.793	555.813		
A 0+00			5.5	550.3
			5.580	550.233
	8.440	558.673		
+50			8.4	550.3
1+00			9.0	549.7
+50			9.4	549.3
			1.703	556.970
	14.044	571.014		
			0.840	570.174
	13.970	584.144		
			0.950	583.194
B line =	14.660	597.854		
B 1+00			10.0	587.8
+50			3.9	593.9
			1.200	596.654
	13.880	610.534		
2+00			13.5	597.0
+50			12.7	597.8
			0.510	610.024
	14.560	624.584		
3+00			7.8	616.8
			0.600	623.984

L.A. Cox
J Lockhart
C McKinnon

— 25 —

3/31/17

spike in Rock West end tunnel 27

Bolt in West abut. Island Mt. Bridge

				623.984
	13.720	637.704		
			0.840	636864
	12.080	648.944		
3+50			4.4	644.5
			0.730	648.214
	7.190	655.404		
4+00			2.4	653.0
+50			4.2	659.6
			10.870	644.534
	5.34	649.874		
5+00			16.6	633.3
+50			5.6	644.3
			1.180	648.694
	9.660	658.354		
6+00			2.3	656.0
+50			6.5	651.8
			13.980	644374
	0.390	644.764		
7+00			7.6	637.2
			14.990	629.774
	0.750	630.524		
+50			10,2	620.3
8+00			29.6	600.9
+34			6.8	623.7
			14.690	615.834
	0.890	616.724		

		616.724		
8+50			36.2	580.5
9+0425			16.2	600.5

4+00 +102 +100 +100 +100 +100
170 180 190 200 206

+50 +93 +95 +90 +95 +100
170 180 190 200 210

3+00 +65 +61 +69 +75 +81 +83
170 180 190 200 210 220

B = Line

+50 +46 +47 +50 +52 +54
170 180 190 200 210

2+00 +44 +47 +48 +51 +56
170 180 190 200 210

+50 +42 +46 +49 +53 +56
170 180 190 200 210

1+00 -1 -1 -1 -1 00 +2 +8 +22
10 20 30 37.5 40 50 58

A = Line

+50 -0 -1 -0 -0 -0 00 +4 +8 +21
10 20 30 40 41 50 55 58

A" 0+00 -0 -0 -1 -1 -1 -0 00 +4 +8
10 20 30 40 50 60 70 80

+110⁸ +103³ +113⁶ +119² +116⁶ +113⁰ +111⁶ +129⁹ +129⁰ +117⁰
210⁰ 215⁰ 220⁰ 230⁰ 240⁰ 250⁰ 253⁰ 263⁰ 270⁰ 271⁰
+123⁶ +126⁰
280⁰ 290⁰

+101¹ +102³ +103³ +108⁹ +117⁵ +118⁷ +115³
220⁰ 230⁰ 240⁰ 248⁰ 250⁰ 260⁰ 270⁰

+86⁶ +89⁸ +92³ +97⁰ +99⁶
230⁰ 240⁰ 250⁰ 260⁰ 270⁰

+53¹ +53⁶ +57⁴ +62⁶
220⁰ 230⁰ 240⁰ 250⁰

+59³ +60⁴ +61⁸
220⁰ 230⁰ 240⁰

+59⁹ +61⁷
220⁰ 230⁰

+22¹ +23³ +24¹ +25³ +26⁵ +28⁷ +31⁰ +30⁰ +31³ +32⁵ +35⁷
60⁰ 70⁰ 80⁰ 90⁰ 100⁰ 110⁰ 120⁰ 130⁰ 140⁰ 150⁰ 160³
+36⁸ +38³ +40⁵ +42⁷
170 180⁰ 190⁰ 200⁰

+21⁶ +23³ +22¹ +25⁰ +26⁴ +27⁸ +29⁵ +30⁹ +32³ +33³
60⁰ 70⁰ 80⁰ 90⁰ 100⁰ 110⁰ 120⁰ 130⁰ 140⁰ 150⁰

+13² +12⁸ +17² +18⁷ +20⁵ +22⁰
90⁰ 100⁰ 110⁰ 120⁰ 130⁰ 140⁰

+34 $+72\frac{7}{170^\circ}$ $+67\frac{1}{178^\circ}$ $+52\frac{9}{188^\circ}$ $+63\frac{9}{198^\circ}$ $+53\frac{5}{208^\circ}$ $+57\frac{5}{216^\circ}$ $+64\frac{9}{225^\circ}$

8+00 $+49\frac{9}{170^\circ}$ $+72\frac{6}{178^\circ}$ $+62\frac{9}{188^\circ}$ $+54\frac{9}{198^\circ}$ $+55\frac{9}{200^\circ}$ $+58\frac{3}{210^\circ}$ $+62\frac{3}{220^\circ}$

0 8 18 28 30 40 50

+50 $+69\frac{3}{170^\circ}$ $+66\frac{9}{180^\circ}$ $+67\frac{5}{190^\circ}$ $+66\frac{5}{200^\circ}$ $+62\frac{5}{210^\circ}$ $+59\frac{0}{220^\circ}$ $+63\frac{6}{230^\circ}$

0 10 20 30 40 50 60

7+00 $+86\frac{2}{170^\circ}$ $+86\frac{4}{180^\circ}$ $+87\frac{1}{190^\circ}$ $+88\frac{6}{200^\circ}$ $+89\frac{2}{210^\circ}$ $+89\frac{3}{220^\circ}$ $+91\frac{3}{230^\circ}$

0 10 20 30 4 50 60

+50 $+100\frac{8}{170^\circ}$ $+101\frac{4}{180^\circ}$ $+101\frac{7}{190^\circ}$ $+102\frac{8}{200^\circ}$ $+103\frac{8}{210^\circ}$ $+103\frac{7}{220^\circ}$

6+00 $+105\frac{0}{170^\circ}$ $+108\frac{0}{180^\circ}$ $+110\frac{8}{190^\circ}$ $+113\frac{4}{200^\circ}$ $+116\frac{6}{210^\circ}$ $+119\frac{2}{220^\circ}$ $+120\frac{6}{230^\circ}$

+50 $+93\frac{3}{170^\circ}$ $+100\frac{3}{180^\circ}$ $+110\frac{6}{190^\circ}$ $+118\frac{9}{200^\circ}$ $+120\frac{2}{210^\circ}$ $+120\frac{6}{220^\circ}$ $+127\frac{3}{230^\circ}$

5+00 $+82\frac{3}{170^\circ}$ $+89\frac{2}{180^\circ}$ $+97\frac{7}{190^\circ}$ $+101^\circ$ $+100\frac{5}{210^\circ}$ $+104\frac{2}{220}$ $+110\frac{1}{230^\circ}$

4+50 $+108\frac{6}{170^\circ}$ $+109\frac{7}{180^\circ}$ $+110\frac{8}{187^\circ}$ $+103\frac{4}{190^\circ}$ $+96\frac{9}{191^\circ}$ $+99\frac{9}{200^\circ}$ $+102\frac{4}{210^\circ}$

$+\frac{64^{0}}{230^{0}}$ $+\frac{62^{2}}{240^{0}}$ $+\frac{67^{4}}{250^{0}}$ $+\frac{73^{3}}{260^{0}}$

$+\frac{65^{8}}{224^{0}}$ $+\frac{64^{1}}{230^{0}}$ $+\frac{67^{5}}{240^{0}}$ $+\frac{63^{0}}{250^{0}}$ $+\frac{67^{0}}{260^{0}}$ $+\frac{71^{3}}{270^{0}}$

54 60 70 80 90 100

$+\frac{67^{1}}{240^{0}}$ $+\frac{65^{4}}{250^{0}}$ $+\frac{74^{4}}{260^{0}}$ $+\frac{73^{0}}{270^{0}}$

70 80 9 100

$+\frac{85^{7}}{240^{0}}$ $+\frac{87^{3}}{250^{0}}$ $+\frac{89^{3}}{260^{0}}$ $+\frac{90^{1}}{270^{0}}$

70 80 90 10

$+\frac{103^{8}}{230^{0}}$ $+\frac{103^{5}}{240^{0}}$ $+\frac{105^{0}}{250^{0}}$ $+\frac{106^{2}}{260^{0}}$ $+\frac{106^{7}}{270^{0}}$

$+\frac{120^{1}}{240^{0}}$ $+\frac{118^{8}}{250^{0}}$ $+\frac{118^{3}}{260^{0}}$ $+\frac{118^{7}}{270^{0}}$

$+\frac{128^{3}}{240^{0}}$ $+\frac{127^{5}}{250}$ $+\frac{132^{6}}{255}$ $+\frac{128^{3}}{260^{0}}$ $+\frac{125^{9}}{270^{0}}$

$+\frac{112^{0}}{240^{0}}$ $+\frac{118^{0}}{250^{0}}$ $+\frac{122^{6}}{260^{0}}$ $+\frac{126^{3}}{270^{0}}$

$+\frac{100^{0}}{220^{0}}$ $+\frac{104^{6}}{230^{0}}$ $+\frac{114^{5}}{235^{0}}$ $+\frac{112^{8}}{240^{0}}$ $+\frac{115^{8}}{250^{0}}$ $+\frac{123^{7}}{260^{0}}$ $+\frac{130^{3}}{270^{0}}$

$4+04\frac{2}{=}$ $+49\frac{5}{170°}$ $+53\frac{5}{180°}$ $+56\frac{4}{190°}$ $+58\frac{6}{200°}$ $+56\frac{3}{210°}$ $+58\frac{4}{220°}$ $+56\frac{4}{230°}$

$8+50$ $+129\frac{5}{170°}$ $+31\frac{1}{180°}$ $+32\frac{7}{190°}$ $+37\frac{2}{200°}$ $+42\frac{7}{210°}$ $+48\frac{7}{220°}$ $+52\frac{8}{225°}$

Cox
Lockhart
McKinnon

4/2/17

$\frac{4}{0^\circ}$ $+\frac{60^\circ}{240^\circ}$ $+\frac{62^6}{250^\circ}$ $+\frac{68^4}{252^\circ}$ $+\frac{68^4}{256^\circ}$ $+\frac{66^2}{260^\circ}$ $+\frac{64^2}{270^\circ}$

$+\frac{62^7}{230^\circ}$ $+\frac{59^4}{240^\circ}$ $+\frac{84^4}{250^\circ}$ $+\frac{76^5}{260^\circ}$ $+\frac{78^2}{261^\circ}$ $+\frac{78^5}{270^\circ}$

	℄						
+50	-2^{1}	$\frac{00}{33^{5}}$	$+\frac{5^{0}}{40^{0}}$	$+\frac{17^{2}}{50^{0}}$	$+\frac{32^{0}}{60^{0}}$	$+\frac{40^{9}}{70^{0}}$	$+\frac{54^{6}}{80^{0}}$
5+00	-1^{9}	$\frac{00}{27^{0}}$	$+\frac{1^{6}}{30^{0}}$	$+\frac{11^{5}}{40^{0}}$	$+\frac{25^{7}}{50^{0}}$	$+\frac{35^{2}}{60^{0}}$	$+\frac{42^{7}}{70^{0}}$
+50	-1^{7}	$\frac{00}{24^{0}}$	$+\frac{3^{0}}{30^{0}}$	$+\frac{10^{1}}{40^{0}}$	$+\frac{25^{0}}{50^{0}}$	$+\frac{32^{9}}{60^{0}}$	$+\frac{42^{3}}{70^{0}}$
4+00	-1^{6}	$-\frac{0^{7}}{10^{0}}$	$\frac{00}{14^{0}}$	$+\frac{1^{4}}{20^{0}}$	$+\frac{4^{8}}{30^{0}}$	$+\frac{22^{1}}{40^{0}}$	
+50	-1^{3}	$-\frac{1^{5}}{23^{0}}$	$\frac{00}{25}$	$+\frac{7^{1}}{30^{0}}$	$+\frac{8^{4}}{36^{5}}$	$+\frac{15^{4}}{40^{0}}$	$+\frac{31^{0}}{50^{0}}$
3+00	-1^{8}	$\frac{00}{20^{0}}$	$+\frac{4^{8}}{30^{0}}$	$+\frac{13^{2}}{40^{0}}$	$+\frac{27^{2}}{50^{0}}$	$+\frac{34^{7}}{60^{0}}$	
+50	-3^{0}	$-\frac{1^{0}}{30^{0}}$	$\frac{00}{32^{0}}$	$+\frac{6^{9}}{40^{0}}$	$+\frac{10^{6}}{50^{0}}$	$+\frac{16^{9}}{60^{0}}$	$+\frac{19^{2}}{70^{0}}$
2+00	-1^{6}	$-\frac{1^{3}}{18^{5}}$	$\frac{00}{20^{0}}$	$+\frac{0^{2}}{22^{5}}$	$+\frac{22^{7}}{33^{0}}$	$+\frac{25^{7}}{40^{0}}$	$+\frac{16^{4}}{44^{0}}$
	-1^{8}	-1^{8}	-0^{8}	$+5^{0}$	$+14^{9}$		
A1+50	-1^{0}	$-\frac{1^{0}}{10^{0}}$	$\frac{00}{12^{5}}$	$+\frac{5^{8}}{20^{0}}$	$+\frac{15^{7}}{30^{0}}$	$+\frac{25^{4}}{40^{0}}$	$+\frac{27^{9}}{50^{0}}$

4/5/17

+66	+69	+72	+73	+65	+67	+75	+78	+84	+93
90	100	110	120	127	130	140	150	160	170
+54	+65	+68	+82	+72	+75	+75	+78	+80	+82
80	90	100	110	120	130	140	150	160	170
+44	+59	+67	+64	+71	+92	+98	+102	+94	+108
80	90	100	110	120	130	140	150	160	170
+30	+40	+47	+57	+65	+73	+78	+98	+89	
50	60	70	80	90	100	110	120	130	
				+90	+93	+92	+102		
				140	150	160	170		
+41	+52	+62	+66	+71	+73	+66	+67	+68	+67
60	70	80	82	90	94	100	110	120	130
						+68	+79	+79	+93
						140	150	160	170
+43	+44	+51	+60	+58	+47	+51	+55	+59	
70	80	90	100	110	120	130	140	150	
					+63	+65			
					160	170			
+26	+32	+38	+40	+43	+44	+45	+47	+45	+46
80	90	100	110	120	120	130	140	150	160
								+46	
								170	
+17	+20	+23	+27	+30	+30	+38	+39	+33	+38
60	60	70	80	90	96	100	102	110	120
					+34	+38	+41	+42	+46
					130	140	150	160	170
+28	+24	+25	+25	+29	+27	+29	+32	+37	
60	70	80	90	100	110	120	130	140	
					+40	+41	+42		
					150	160	170		

9+04^{2}	+1^{8}	+1^{8} / 50°	+1^{1} / 60°	+0^{7} / 100°	+4^{5} / 110°	+10^{1} / 120°
+50	+1^{8}	00 / 60°	00 / 85°	+1^{2} / 90°	+6^{3} / 100°	+17^{9} / 110°
+34	Same as original sec.					
8+00	+1^{6}	00 / 15°	00 / 72°	+8^{6} / 80°	+20^{8} / 90°	+39^{3} / 100
+50	+1^{5}	+1^{3} / 60°	+8^{3} / 70°	+24^{7} / 80°	+38^{0} / 90°	+39^{9} / 100°
7+00	+0^{5}	+2^{7} / 50	+15^{0} / 60°	+30^{0} / 62°	+37^{4} / 70°	+42^{0} / 80°
6+50	−1^{6}	00 / 24°	+2^{1} / 30°	+8^{8} / 40°	+23^{0} / 50°	+42^{5} / 60°	+58^{5} / 70°
6+00	−2^{9}	00 / 28°	+0^{5} / 30°	+6^{3} / 40°	+23^{0} / 50°	+38^{4} / 60°	+45^{8} / 70°

4/5/17

+19 +29 +41 +44 +41 +49
130 140 143 150 160 170

+22 +28 +30 +31 +30 +29
120 130 140 150 160 170

+38 +38 +43 +50 +59 +58 +51 +50 +49
110 120 130 140 143 148 150 160 170

+41 +44 +48 +54 +59 +64 +69
110 120 130 140 150 160 170

+50 +60 +70 +75 +79 +82 +84 +85 +86
90 100 110 120 130 140 150 160 170

+79 +89 +94 +95 +97 +96 +97 +99 +99 +100
80 90 92 100 110 120 130 140 150 160
+100
170

+53 +71 +79 +81 +90 +93 +98 +102 +103 +105
80 90 100 110 120 130 140 150 160 170

LT				550.595
	4.115	554.710		
			4.590	550.120
	4.140	554.310		
0+00			4.7	549.6
+50			4.9	549.4
1+00			5.2	549.1
2+00			6.0	548.3
+50			6.5	547.8
3+00			8.0	546.3
			7.967	546.343
	7.736	554.079		
3+00			6.6	547.5
+50			5.1	549.0
4+00			6.2	547.9
+50			6.5	547.6
5+00			6.8	547.3
+50			6.7	547.4
6+00			7.5	546.6
+50			6.2	547.9
7+00			5.3	548.8
			4.670	549.409
	7.587	~~557.096~~		
+50		556.996	7.1	550.0
8+00			5.6	551.5
+50			6.0	551.1
9+043			5.8	551.3

-4/20/17

Boldt in W. West. Abut. Island Mt. Bridge

549.0 +06

approx. stakes gone 549.

approx. stake gone

		556.996		
		~~557.096~~		554.036
			2.960	~~554.136~~
		559.116		
	5.080	~~559.216~~		555.206
			3.910	~~555.306~~
		560.633		
	5.427	~~560.733~~		557.008
			~~3.625~~	~~557.108~~
		570.523		
	13.515	~~570.623~~		570.185
			0.338	~~570.285~~
			~~1.252~~	
			12.52	558.00
			1285	557.67
			13.06	557.46
				550.595
	4.42	555.015		
			4.25	550.76
			4.00	551.01

4/20/17

"B" BM #77 on Buckeye 45' RtLt MP 194
elev. 570.630 (marked) Diff 0.345
p.f. east end of siding opp MP 194
ps " " " " " " "
ps siding approx sta. 3326
BM. west end of Bridge

Top of Rail at face of back wall West end of bridge on Right
Top of Rail at face of back wall West end of bridge on left

Levels on Base Line A"

Stat.	Rod	Elev.	Grade	Grade
B. M.		551.42	Bolt in W. Abut.	
	+4.33	555.75		
	+4.69	551.06		
	+5.11	556.17		
	-6.06	550.11		
	+4.03	554.14		
0+00	-3.4	50.7	549.00	+1.7
+50	-4.07	50.07	549.00 Top bo	+1.1
1+00	-4.50	49.6	549.00	+0.6
+50	-3.2	50.9	549.00	+1.9
2+00	-5.67	48.47	549.00 Spike	-0.5
+50	-6.3	47.8	549.00	-1.2
3+00	-5.5	48.6	549.00	-0.4
+50	-5.1	49.0	549.00	00
+75	5.1	49.0	549.00	00
4+00	5.0	49.1	549.00	00
	-4.19	549.75		
T. P.	+4.09	554.04		
+50	-5.5	48.5	549.00	-0.5
5+00	-6.0	48.0	549.00	-1.0
+50	-5.9	48.1	549.00	-0.9
+84	-4.2	49.8	549.00	+0.8
6+00	-3.7	50.3	549.00	+1.3
+50	-3.6	50.4	549.00	+1.4
7+00	-3.8	50.2	549.00	+1.2
+25	-2.7	51.3	549.00	+2.3
+50	-2.7	51.3	549.00	+2.3
8+00	-1.9	52.1	549.00	+3.1

W. B. Taylor
J. Lockhart
7/16/17

Island Mt. Bridge see pg. 25

		5540.4		
8+50	-2.2	51.8	.	+2.8
9+04	-1.9	52.1	/	+3.1

X Sections Rip Rap

No work done beyond 8+00

8+00 +0.2 / 13 — −0.8 / 16 (−1.4 Ft. Rock / 52 slope) — +4.1 / 73 — +8.5 / 84 Top Rock slope

7+50 (−1.0 Ft. Rock / 41 slope) (+2.8 / 38) — +36.0 / 100.0 — +42.0 / 102 — +48.7 / 132 — +52.0 / 140

7+25 −1.0 / 9.2 (−2.7 Ft. earth / 58 slope) — +21.0 Top earth slope / 88 — +40.8 / 110

7+00 (−1.0 / 57 Toe earth slope) (+11.3 Top / 75 earth slope) — +17.0 / 75 — +37.0 / 100

6+50 −1.4 / 11.0 (−2.4 / 48 Toe earth slope) — +18 / 75 — +31.0 / 89 — +37.0 / 88

6+00 −0.8 / 5.0 — −1.8 / 13 — −3.0 / 17 — −2.7 / 45 Toe earth slope — +17.7 / 72

5+50 (0.0 / 41 Toe earth slope) (+5.0 / 49 Top earth slope) — +33.0 / 68

5+84 −1.3 / 4 — −1.0 / 11 (−1.2 / 46 Toe earth slope) — +19.7 / 72 Top earth slope

5+00 (+0.3 / 28 Toe earth slope) (+4.1 / 35 Top Earth slope) — +10.1 / 35 — +40.0 / 71

4+50 ← Loose Rock −0.3 / 25 — +30.3 / 58 — +66.9 / 110 →

4+00 (+0.4 / 17 Toe earth slope) (Toe earth +13.5 / slope 42) — +40.0 / 66

3+50 −0.7 / 21 Toe Rock slope — +40.0 / 61 — +45.0 / 61 — +61.5 / 83

The elevations of stations will be found on page 35.

W.B.T. 8/16/17

W. B. Taylor
J. Lockhart
C. D. Bell 7/17/17

Pit

+26.0 / 88 | +31 / 100 | +40.0 / 106 | +35.8 / 115 | +41.0 / 130 | +46.0 / 134 | +51.6 / 140

+55.0 / 124 | +58.5 / 126 | +63.7 / 130 | +71.5 / 140

+55 / 116 | +63.4 / 126 | +70.0 / 126 | +83.0 / 140 | +85.0 / 143 | +85.6 / 150

+47.0 / 102 | +55.1 / 113 | +74.0 / 130 | +84.0 / 138 | +89.0 / 142 | +95.0 / 142 | 99.0 / 150 | 100.0 / 170

+26.5 / 75 | +34.5 / 85 | +51.0 / 102 | +66.0 / 105 | +86.0 / 134 | +99.0 / 140 | +106.5 / 170

+53.6 / 75 | +65.0 / 101 | +75.0 / 104 | +75.7 / 110

+29.0 / 72 | +59.0 / 92 | +70.0 / 97 | +74.0 / 107 | +79.0 / 118 | +86.0 / 128 | +99.1 / 140

+49.0 / 78 | +59.0 / 87 | +67.6 / 94 | +69.5 / 100.0

+58.6 / 84.0 | +70.0 / 100.0 | +82.0 / 113 | +98.5 / 120

+75 / 94.

on E

3+00	(+0.4 / 24 Toe earth slope)	+25.1 / 52 Top earth slope	+31.0 / 52	
2+75	Same Section as 3+00			
2+50	+0.5 / 36 Toe slope	+11.0 / 58.0	+19.0 / 58.0	+21.3 / 70.0
2+00	+1.0 / 33	+10.2 / 44	+23.0 / 53	
1+50	-1.7 / 32	+24.1 / 62	+24.5 / 70	
1+00	+0.25 / 57	+5.3 / 66	+26.1 / 72	+29.7 / 100
0+50	+1.4 / 68	+7.9 / 78	+23.6 / 82	+25.5 / 90
0+00	+0.7 / 75	+4.0 / 80	+13.5 / 87	+13.0 / 100

+35,2	+37,0	+42,0	+47,0	+53,2
56	66	68	76	81

Level over Derailment

Sta.	B.S.	H.I.	Low Rail F.S.	Elev.
BM.	2.37	138.57		136.20
6495+00			4.24	134.33
+10			4.22	134.35
+20			4.20	134.37
+30			4.18	134.39
+40			4.18	134.39
+50			4.18	134.39
+60			4.15	134.42
+70			4.15	134.42
+80			4.12	134.45
+90			4.10	134.47
6496+00			4.09	134.48
+10			4.08	134.49
+20			4.09	134.48
+30			4.06	134.51
+40			4.10	134.47
+50			4.10	134.47
+60			4.13	134.44
+70			4.14	134.43
+80			4.18	134.39
6496+91			4.19	134.38
6497+00			4.20	134.37
+10			4.24	134.33
+20			4.26	134.31
+30			4.30	134.27
+40			4.32	134.25
+50			4.32	134.25

J. F. Lockhart
Nov 13 1918

East of Stitz Creek.

High Rail

F.S.	Elev.	
		Elev. of BM.
4.04	134.53	
4.00	134.57	
4.00	134.57	
3.96	134.61	
3.94	134.63	
3.94	134.65	
3.92	134.70	
3.87	134.75	
3.85	134.72	
3.83	134.74	
3.82	134.75	
3.80	134.77	
3.77	134.80	
3.75	134.82	
3.76	134.81	
3.77	134.80	
3.79	134.78	
3.81	134.76	
3.85	134.72	
3.90	134.60	Point of Derailment
3.92	134.65	
3.94	134.63	
3.96	134.61	
3.98	134.59	
4.00	134.57	
4.00	134.57	

Levels over Derailment

Sta.	B.S.	H.I.	Low Rail F.S.	Elev.
		138.67		
+60			4.30	134.27
+70			4.32	134.25
+80			4.33	134.24
+90			4.35	134.42
6498+00			4.36	134.21
+10			4.34	134.23
+20			4.36	134.21
+30			4.37	134.20
+40			4.36	134.21
6498+46½	B.C.		/	
+50			4.30	134.27
+60			4.30	134.27
+70			4.32	134.25
+80			4.32	134.25
+90			4.32	134.25
6490+00			4.34	134.23

J.F. Lockhart
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East of Stitz creek.

High Rail F.S.	Elev	
A.02	134.55	
A.06	134.51	
A.10	134.47	
A.15	134.42	
A.18	134.39	
A.19	134.38	
A.24	134.23	
A.26	134.21	
A.30	134.27	
		Curve to Right
A.34	134.23	
A.32	134.25	
A.34	134.23	
A.30	134.27	
A.25	134.32	
A.25	134.32	

Material In Trestle Mile 213

A470 + 47^{3} = West End.

west Bulkhead old. 1-P. 8" X 17" X 14^{0} Pine F.B.M. 158.6

FBM=209.6 1-P-8" X 17" X 18^{5} pine

FBM=232.2 1-P-8" X 17" X 20^{50} Pine

Bent #1

F.B.M=168 Cap 12" X 14" X 15^{0} Redwood.

4 old Piling

Bent #2

F.B.M=168 Cap 12" X 14" X 12^{0} Pine

FBM=163.2 " 10" X 14" X 14^{0} Redwood (old)

4 old Piling

Bent #3

F.B.M=168 Cap 12" X 14" X 12^{0} Pine

FM=175 " 10" X 14" X 15^{0} Redwood (old)

4 old Piling

Bent #4

F.B.M=168 cap 12" X 14" X 12^{0} pine

F.B.M=175 " 10" X 14" X 15^{0} Redwood (old)

4 old Piling

Bent #5

F.B.M 168 Cap 12" X 14" X 12^{0} pine

FBM=175 " 10" X 14" X 15^{0} Redwood (old)

4 old Piling

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Bent #6 — Frame Bents.

Post	1	2	3	4	5
F.B.M. 1877 10"X14" Pine	3½	3½	3½	3½	4½

F.B.M. 85 — 2-P. Bracing 4"X8"X16½

F.M.B. 238 — 1-cap 12"X14"X17½ Redwood (sill)

F.M.B. 168 — 1- " 12"X14"X12½ Pine

F.M.B. 254.4 — 5-P 8"X17"X14½ Pine (old stringer)

F.B.M. 72 — 12-P 3"X12"X2½ Redwood (New)

5 old Piling under Frame work.

Bent #7

Post	1	2	3	4	5
F.B.M. 2272 10"X14" Pine	2½	3½	3½	3½	4½

F.B.M. 77.1 — 2-P. Bracing 4"X8"X14½ Pine

F.B.M. 231 — 1-cap 12"X14"X16½ Redwood (New)

F.B.M. 168 — 1-cap. 12"X14"X12½ pine

F.B.M. 283.2 — 5-P. 8"X17"X5½ Pine (old)

F.B.M. 720 — 12-P 3"X12"X2½ Redwood.

5 old Piling under Frame work.

Bent # 8

Post	1	2	3	4	5
F.B.M. 3338.4 10"X14" Pine	5½	5½	5½	5½	6½

F.B.M. 834 — Bracing 1-P 15½ 1-P. 15½ 4"X8" Pine

F.B.M. 217 — 1 Cap 12"X14"X15½ Redwood

F.B.M. 168 — 1 " 12"X14"X12½ pine

F.B.M. 283.2 — 5-P 8"X17"X5½ Pine (old)

F.B.M. 72 — 12-P. 3"X12"X2½ Redwood

6 old Piling under Frame work.

Bent #9

F.B.M. 424.8
Post — 1 — 2 — 3 — 4 — 5
10" X 14" Pine 7½ 7½ 7½ 7½ 8½
F.B.M. 89.6 Bracing 1-P. 16½ & 1-P 17½ 4" X 8" Pine
F.B.M. 266 1 - cap 12" X 14" X 19½ Redwood
F.B.M. 168 1 - Cap 12" X 14 X 12½ Pine
F.B.M. 263.2 5-P 8" X 17" X 5½ Pine (old)
F.B.M. 72 15-P 3" X 12" X 2½ Redwood
5 old Piling under Frame Bents

Bent #10

Post — 1 — 2 — 3 — 4 — 5
F.B.M. 424.8
10" X 14" Pine 7½ 7½ 7½ 7½ 8½
F.B.M. 89.6 Bracing 1-P 16½ & 1-P 17½ 4" X 8" Pine
F.B.M. 266 cap 12" X 14" X 19½ Redwood
F.B.M. 168 cap 12" X 14" X 12½ Pine
F.B.M. 339.9 6-P - 8" X 17" X 5½ Pine (old)
F.B.M. 96 16-P 3" X 12" X 2½ Redwood
5 old Piling under Frame work.

Bent #11

Post — 1 — 2 — 3 — 4 — 5
F.B.M. 424.8
10" X 14" Pine 7½ 7½ 7½ 7½ 8½
F.B.M. 90.4 Bracing 1-P 17½ & 1-P 16½ 4" X 8" Pine
F.B.M. 254 Cap 12" X 14" X 18½ Redwood
F.B.M. 168 Cap 12" X 14" X 12½ Pine
F.B.M. 396.5 7-P 8" X 17" X X 5½ Pine (old)
F.B.M. 96 Cap 12" X 16 - P3" X 12" X 2½ Redwood

Bent #12

Post	1	2	3	4	5
F.B.M 349.8 10"X14" Pine	5⁸	6⁸	5⁹	6⁰	6⁶

F.B.M. 82.4 Bracing 2-P. 4"X8"X15⁵ Pine
F.B.M. 210 1 cap. 12"X14"X15⁰ Redwood
F.B.M = 168 1-Cap. 12"X14"X12⁰ Pine
F.B.M - 226.6 4-P 8"X17"X5⁰ Pine (old)
F.B.M 48 8-P-3"X12"X2⁰ Redwood
6 Piling under Frame work.

Bent #13

Post	1	2	3	4	5
F.B.M. 364.9 10"X14" Pine	6⁰	6⁰	6¹	6⁴	6⁶

F.B.M. = 85.1 Bracing 2-P 4"X8"X16⁰ Pine
F.B.M. = 238 1 Cap 10"X14"X17⁰ Redwood (old)
F.B.M 168 1-Cap. 12X14"X12" Pine
F.B.M 224.4 4-P 8"X17"X5⁰ Pine (old)
F.B.M. 34 4-P-4"X10"X3⁰ Pine
F.B.M 53 2-P-2"X8"X2⁰ Redwood
6 old Piling under Frame work

Bent #14

10"X14" Pine	1	2	3	4	5
F.B.M = 352.1	5⁸	5⁸	5⁹	6⁷	6⁵

F.B.M. 85.2 1-P Bracing 4"X8"X17⁰ Pine
F.B.M. 42.5 P " " " " 16⁰ "
F.B.M 252 1 cap 12"X14"X14⁰ Pine Redwood
F.B.M 168 1-Cap 12"X14"X12⁰ Pine
F.B.M 334.96 P. 8"X17"X5⁰ Pine (old)
F.B.M. 40 4P 4"X10" 13⁰ Pine

4 P. 2"X6"X 20 Redwood

Bent #15

Post	1	2	3	4	5
F.B.M 352.1	5	5	5	6	6

F.B.M. 90.4 2-P Bracing 4"X8"X17 Pine
F.B.M 266 1-cap 12"X14"X19 Redwood
F.B.M 168 1-cap 12"X14"X12 Pine
F.B.M 396.5 7-P 8"X17"X5 Pine (old)
F.B.M. 90 6-P-3"X12"X5 Redwood
F.B.M. 79.8 4 P 4"X10"X3 Pine
F.B.M. 90.0 8-P-3"X8"X25 Redwood
5 old Piling under Framework.

Bent #16

Post	1	2	3	4	5
F.M = 284.5 10"X14" Pine	4	4	4	5	5

F.B.M = 224 1 cap 12"X14"X16 Redwood
F.B.M = 168 1 cap 12"X14"X12 Pine
F.B.M = 79.8 2 P. Bracing 4"X8"X15 Pine
F.B.M = 339.9 6 P. 8"X17"X5 Pine (old)
F.B.M = 82 18 P 3"X8"X2 Redwood
4 old Piling under Framework.

Bent #17

Post	1	2	3	4	5
F.B.M 172.2	2	2	2	3	3

F.B.M 187.5 1-cap. 10"X14"X16 Redwood (old)
F.B.M 168 1 cap 12"X14"X12 Pine
F.B.M 79.8 2-P Bracing 4"X8"X15 Pine
F.B.M 339.8 6-P 8"X17"X5 Pine old

F.B.M 828 P. 3" X 8" X 25 Redwood

4 old Piling under Frame work

18

Post	1	2	3	4	5
F.B.M 129.6	20	20	21	24	27

F.B.M 74.5 2-P-Bracing 4" X 8" X 14° Long Pine

F.B.M. 210 1-cap 12" X 14" X 15° Redwood

F.B.M-168 1-cap 12" X 14" X 12° Pine

F.B.M-396.5 7-P-8" X 17" X 5° Pine (old)

F.B.M-45 6-P-3" X 12" X 25 Redwood

F.B.M. 70.0 14 P 3" X 8" X 25 "

4 old Piling under Framework

Bent # 19

F.B.M-196 1 cap 12" X 14" X 14° Redwood

4 old Piling

Material in East Bulkhead

F.B.M. 827
- 1-P-8" X 17" X 14° Pine (old)
- 1-P-8" X 17" X 18° " (")
- 1-P-8" X 17" X 19 5 " "
- 1-P-8" X 17" X 21 5 " "

P under Frame work

1-P-8" X 17" X 19° Pine (old)
1-P 8" X 17" X 22° " "
1-P-8" X 17" X 37° " "
1-P-8" X 17" X 16° " "
1-P-8" X 17" X 21° " "

1302.4 F.B.M

4473 + 17 5 East End.

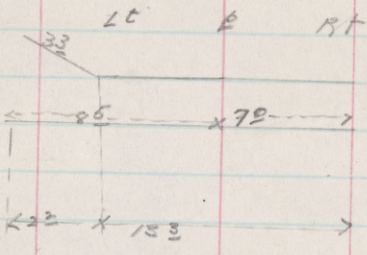
4-95' of New stringer in Trestle.
269 Ties Bridge Tie
Trestle = 270' Long
Guard Rail = New 6" X 8"
There are 6 stringer

= F.B.M. 5608.3 old = 12759.8

F.B.M. guard Rail = 2161.6

Location and Material in Sluceway

4473+11=



Material is (old)

2-P- 8"X17"X3 3 Pine (old)

2-P 8"X17"X 13 3 " "

Floor 5-P 8" X17"X15 3 " "

1-12"X12"X15 0 " "

1-12"X12"X16 0 " "

1-12"X12"X17 0 " "

1-12"X12"X15 0 " "

1-12"X12"X17 0

5-P-6"X8"X26 Long " "

8"X17 X 1242.90 F.B.M.

12X12 960 F.B.M.

6"X8" 52 F.B.M

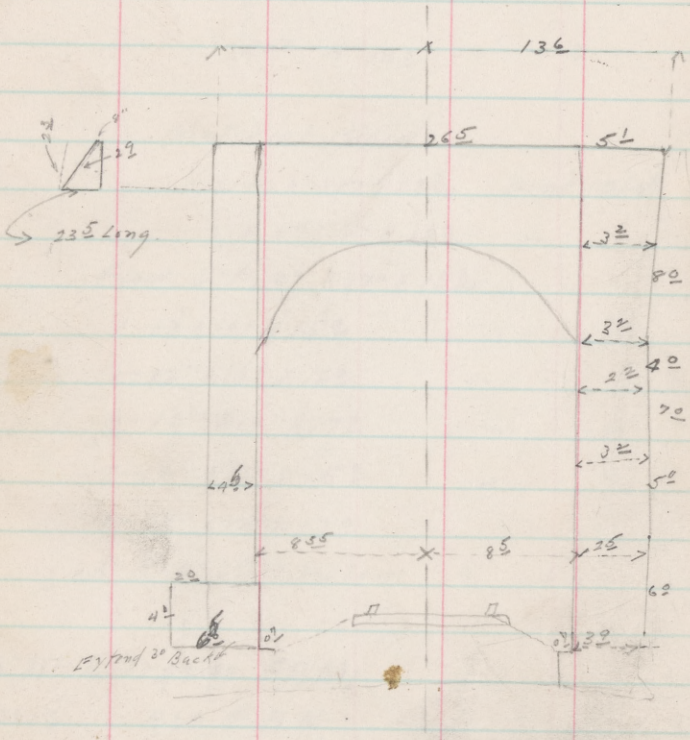
← To S.E.

J. F. Lockhart
Nov 20 1918

under Trestle at Mile 213

West Portal of Island mt.

Front view of Portal.

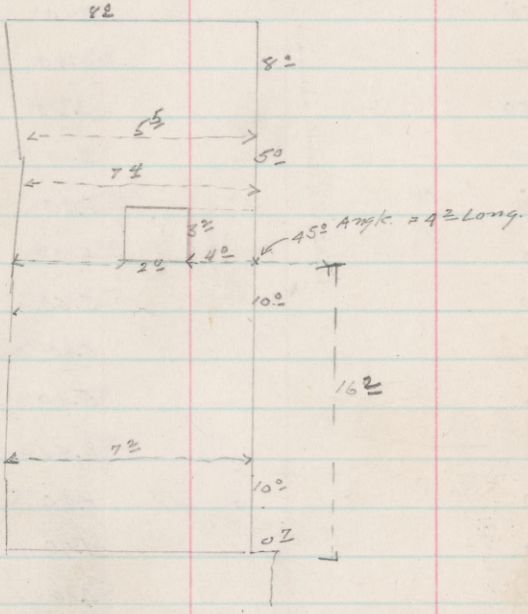


Station of Portal = 3368+19.3

End of End of concrete = 3368+39.3

Tunnel.

Side view of Lt Side of Portal



Levels Rip Rap.

Station	B.S	H.I.	F.S.	Elev.
B.M.	3.79	555.21		551.42
T-P.	3.90	554.70	4.41	550.80
0+00			4.50	550.20
0+50			4.10	550.60
1+00			4.90	549.80
1+50			3.70	551.00
2+00			6.10	548.60
+50			6.40	548.30
3+00			6.00	548.70
+50			5.50	549.20
4+00			5.60	549.10
+50			5.30	549.40
5+00			6.50	548.20
+50			6.60	548.10
6+00			4.40	550.30
+50			4.80	549.90
7+00			4.20	550.50
+50			3.10	551.60
8+00			2.00	552.70
+50			2.80	551.90
9+00			2.40	552.30
+50			2.50	552.20
9+04			2.60	552.10

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Dec. 4 1918

Island mts.

Grade.

Bolt in west Abut. island mts. Bridge

549.00	+ 1 20
549.00	+ 1 60
549.80	+ 0 80
549.00	+ 2.00
549.00	F 0 40
549.00	F. 0 70
549.00	F 0 30
	C. 0 20
	C. 0 10
	C 0 40
	F 0 80
	F. 0 90
	C. 1 30
	C. 0 90
	C. 1 50
	C. 1 60
	C 3 70
	C. 2 90
	C. 3 20
	C. 3 30
	C. 3 10

Cross Section of Pit

0+00 +1.20/00 +1.60/10.0 +1.80/20.0 +1.70/30.0 +2.0/40 +2.10/50

+2.58/140 +2.75/150

0+50 Toe slope +1.60/00 +2.2/10 +2.4/20 +1.4/30 +1.2/40 +1.2/50 +1.7/60

+3.33/150 +3.45/160 +3.61/170

↙ Rock Section ↙ Road.

1+00 +0.8/00 +0.9/10 +0.6/20 +0.5/30 +0.6/40 +0.7/50 +1.1/60 +1.6/70

+3.54/140 +3.63/150 +3.72/160 +3.78/170

1+50 +2.00/00 +1.9/10 +0.2/20 +0.6/30 +1.1/40 +1.04/50 +1.87/60

+3.92/150 +4.19/160 +4.33/170 +4.46/175 +4.82/185 +5.14/195 +5.54/205

2+00 -0.4/00 0.0/10 -0.5/20 -0.3/30 +0.28/38 +0.83/38 +1.0/48

4.11/105 +3.80/110 +3.91/120 +3.65/130 +4.01/140 +4.23/150

2+50 F 0.7/00 -0.4/10 -0.7/20 -0.4/30 +0.86/40 +0.66/50 +1.31/60

+4.18/140 +4.75/150 +4.76/160 +4.69/170

3+00

F 0.3/00 -0.4/10 +0.2/20 +1.4/30 +0.78/40 +1.73/49 +2.59/55

+5.35/135 +5.42/145 +6.68/155 +5.97/165 +6.53/170

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47

Island mts

Toe slope

+2.8 60.0 +3.6 70 +8.1 80 +13.2 84.0 +15.9 90 +16.9 100 +20.1 110 +22.3 120 +24.3 130

+7.2 70.0 +14.8 80 +25.6 90.0 +27.1 100 +28.5 110 +29.8 120 +31.1 130 +32.1 140

+14.8 72.0 +21.8 72.0 +26.8 75.0 +26.6 80 +26.3 90 +27.2 100 +28.1 110 +29.7 120 +33.0 130

+26.9 65 +26.2 70 +26.7 80 +27.1 90 +27.9 100 +29.4 110 +29.9 120 +33.0 130 +35.7 140

+58.8 215 +61.9 225 +63.7 235

+10.8 50 +21.2 57 +20.5 60 +24.3 70 +28.1 80 +33.5 86 +32.7 90 +32.7 97 +37.1 100

+45.1 160 +46.1 170 +48.0 175 +49.7 185 +50.6 195 +53.6 205 +58.2 215 +61.3 225

+17.8 70 +24.7 80 +32.1 90 +39.6 96.0 +39.1 100 +39.8 110 +40.5 120 +41.2 130

+48.8 175 +50.5 185 +53.3 195 +54.1 205 +57.2 215 +55.8 225 +56.0 235

+33.7 65 +43.7 75 +42.5 85 +46.9 95 +49.8 100 +49.6 105 +60.8 115 +54.2 125

+67.8 175 +63.8 185 +71.2 195 +77.6 205 +82.1 215 +84.9 225 +88.6 235 +91.8 245

Cross Section P.7

3+50 C 02 / 00 -06 / 10 -06 / 20 +08 / 30 +71 / 40 +137 / 452

+767 / 110 +727 / 120 +781 / 130 +727 / 140 +813 / 150 +839 / 163

4+00 C. 01 / 00 +02 / 10 +04 / 20 +05 / 24 +62 / 30 +107 / 35 +167 / 40

+71 / 90 +764 / 105 +844 / 120 +902 / 128 +884 / 130 +867 / 145

4+50 C 04 / 00 -10 / 10 -13 / 20 -13 / 27 +42 / 30 +71 / 35 +116 / 40

+928 / 130 +984 / 140 + +1027 / 150 +944 / 160 +1106 / 175

TOC

5+00 F08 -11 / 10 -12 / 20 +41 / 30 +96 / 40 +205 / 50 +302 / 60

+746 / 140 +769 / 150 +817 / 160 +833 / 170 +843 / 175

5+50 F09 -12 / 10 -19 / 20 -19 / 26 02 / 30 +443 / 40 +109 / 50

+727 / 110 +634 / 120 +709 / 130 +769 / 140

+1223 / 2252 +1292 / 2352 +130 / 2452

6+00 C 130 -03 / 10 +17 / 20 +15 / 30 -15 / 35 +06 / 40 +33 / 50

+799 / 124 +849 / 133 +929 / 133.5 +990 / 143 +1004 / 153

+1197 / 225 + 1206 / 235 +1201 / 245

J. F. Lockhart
Dec. 12 1918

Island mts

+26 2 / 51 0 +32 2 / 61 0 +41 2 / 69 0 +51 4 / 78 0 +57 6 / 88 0 +68 6 / 92 0 +73 8 / 100

+93 4 / 170 +95 5 / 175 +97 4 / 185 +93 6 / 195 0 +98 6 / 205 +103 5 / 215 +104 5 / 225 +105 7 / 235 +104 7 / 245 0

+24 2 / 50 +28 6 / 55 +35 0 / 60 0 +40 4 / 65 0 +44 0 / 70 +50 0 / 75 +55 6 / 85 0 +65 8 / 90 0

+87 0 / 160 +91 7 / 160 +103 0 / 170 +104 0 / 175 +102 7 / 185 +102 0 / 195 +102 2 / 205 0 +102 0 / 211 0 +124 6 / 145 0 +121 9 / 135 0 +115 6 / 225 +105 6 / 228 +112 6 / 215

+21 0 / 50 +28 7 / 60 +36 1 / 70 +44 4 / 80 +59 6 / 90 +67 4 / 100 +65 2 / 110 +71 6 / 120

+111 7 / 185 +112 8 / 192 +105 4 / 195 +98 6 / 196 0 +101 9 / 205 104 4 / 215 +102 / 225 +106 6 / 235 +116 5 / 240 +114 8 / 245

+39 2 / 70 0 +48 1 / 80 +56 1 / 85 0 +62 1 / 90 0 6.9 6 / 95 0 +68 7 / 100 +70 5 / 110 +71 5 / 120 +73 3 / 130

+91 2 / 185 +99 7 / 195 0 +103 / 205 +102 5 / 215 +106 2 / 225 +112 0 / 235 +113 8 / 245

+16 8 / 60 +26 5 / 68 0 +52 4 / 70 +56 5 / 78 0 +61 5 / 88 0 +63 4 / 98 0 +72 7 / 100 +22 7 / 108

+79 3 / 150 +84 4 / 160 +91 0 / 170 +95 3 / 175 +102 3 / 185 0 +112 3 / 195 0 +120 1 / 205 +121 2 / 215

+9 7 / 60 +16 2 / 70 +24 3 / 80 +34 5 / 90 +41 6 / 95 +51 1 / 99.0 +54 1 / 99 0 +62 9 / 104 +72 2 / 114

+103 1 / 163 +104 5 / 170 +105 0 / 175 0 +108 0 / 185 +110 8 / 195 +113 4 / 205 +116 6 / 215

Cross Section Pit

6+50	C09	+05/10	+07/20	-05/30	-08/40	+06/50			
		+738/130	+819/140	+907/150	+1008/160	+1017/170	+977/155		
7+00	C15	+11/10	-02/20	-04/30	-02/40	00/50	+28/60	TOC	
		+760/130	+832/140	+853/150	+868/160	+877/170			
7+50	C16	+01/10	-01/20	-08/30	00/40	+31/50	+98/60	+157/70	
		+627/150	+652/160	+694/170	+713/175	+687/185			
8+00	C37	+31/10	+12/20	+14/30	+06/40	+12/50	+11/60		
		+588/143	+577/148	+514/150	+502/160	+			
8+340	Same as L.A. Cox								

J. F. Lockhart
Dec. 13 1918

Island mt.

+7 2/60 +15 6/70 +22 1/80 +33 9/90 +43 3/100 +51 3/110 +55 5/120 +64 3/125

+102 8/175 +102 4/185 +102 7/195 +103 8/205 +104 8/215 +104 2/225 +104 8/235 +104 5/245

+9 6/70 +14 1/80 +25 6/85 +32 1/90 +40 6/100 +50 1/110 +59 6/120 +66 8/125

+88 0/175 +88 2/185 +88 7/195 +90 4/205 +91 9/215 +91 1/225 +93 1/235 +87 5/245 +89 9/255

+21 4/80 +30 7/90 +39 7/100 +45 7/105 +46 2/110 +47 0/120 +50 8/130 +57 2/140

+69 5/195 +68 5/205 +64 5/215 +61 0/225 +65 6/135 +69 1/145 +66 4/255

+1 1/67 +3 1/70 +12 6/80 +20 1/90 +38 6/100 +37 3/110 +38 2/120 +42 3/130 +49 3/140

+51 9/175 +74 4/183 +64 7/193 +56 7/203 +57 7/205 +56 1/215 +60 1/225 +63 6/229

From 8434 to 9+04 5

Levels over A line

Sta	B.S.	H.I.	F.S	Elev.
BM.	6.9	555.5		548.6.
0+50			5.2	550.3
1+00			5.6	549.9
+50			4.2	551.3
2+00			6.9	548.6
+50			6.4	549.1
3+00			6.6	548.9
+50			5.3	550.2
4+00			5.3	550.2
+50			6.6	548.9
5+00			6.6	548.9
+50			7.3	548 2.
6+00			6.5	549 0
+50			5.4	550.1

J. F. Lockhart
3/6/19.

50

Rip Rap pit Island Mts.

grade	cut	Fill
Elev. of sta	2700. on Line	
549.00	C. 1.3	
549.00	C. 1.0	
549.00	C. 2.3	
549.00		F. 0.9
549.00	00	00
549.00	00	00
549.00	C 1½	
549.00	C 1½	
549.00	00	00
549.00	00	00
549.00		F. 0.8
549.00	00	00
549.00	C 1.L	

Final Cross Section of

0+00	C 1.7 / 00	+17 / 10	+13 / 20	+12 / 30	+12 / 40	+24 / 50	+26 / 60	+28 / 70	+37 / 80
0+50	C 1.3 / 00	+10 / 10	+21 / 20	+13 / 30	+20 / 40	+27 / 50	+36 / 60	+65 / 70	+112 / 80
1+00	C 1.0 / 00	+14 / 10	+21 / 20	+10 / 30	+10 / 40	+10 / 50	+25 / 60	+53 / 70	
1+50	C 2.3 / 00	+27 / 10	+07 / 20	+08 / 30	+12 / 40	+30 / 50	+55 / 60	+124 / 70	
2+00	F .04 / 00	00 / 10	-06 / 20	00 / 30	00 / 40	+03 / 50	+03 / 53	+26 / 60	
+50	00 / 00	-02 / 10	-09 / 20	-02 / 30	-10 / 40	-14 / 50	+02 / 60	+32 / 65	
3+00	00 / 00	00 / 10	+04 / 20	-05 / 30	-04 / 40	+02 / 50	+78 / 60	+186 / 70	
2+50	C 1.2 / 00	00 / 10	-12 / 20	-12 / 30	-11 / 40	+02 / 50	+79 / 60	+134 / 65	
4+00	C 1.2 / 00	C 08 / 10	-09 / 20	-08 / 30	-00 / 35	+25 / 40	+105 / 50	+163 / 55	
		+794 / 120	+840 / 130	+865 / 140					
4+50	00 / 00	-16 / 10	-20 / 20	-13 / 30	-09 / 40	+65 / 50	+114 / 55	+192 / 55	
5+00	00 / 00	-06 / 10	-05 / 20	-05 / 30	-05 / 40	00 / 48	+10 / 50	+80 / 60	
5+50	F .08 / 00	-02 / 10	+01 / 20	-03 / 30	+01 / 40	00 / 45	+22 / 50	+108 / 60	
6+00	00 / 00	-01 / 10	Hi. Rock. -08 / 20	+18 / 30	-17 / 40	+50 / 50	+125 / 60	+191 / 70	Top +246 / 80

J.F. Lockhart
3/6/19

Rip Rap pit Island mts

+13.6 / 90° (+15.3 / 90°) +16.9 / 100

+21.5 / 88° +23.1 / 90° (+26.6 / 97°) +27.1 / 100
+13.6 / 76° +24.5 / 78° +28.6 / 80°

+18.8 / 75° (+26.7 / 800) 0.9.

+9.0 / 70° +20.5 / 80° +28.6 / 90° (+32.7 / 970) 0.9.

+11.5 / 65° +17.9 / 75° +24.7 / 80° 0.9.

+26.1 / 75° +32.2 / 80° +37.8 / 88° X +45.4 / 95° +49.6 / 105 (+60.5 / 115°) 0.9.

+19.6 / 70° +25.0 / 75° +53.6 / 84.4 Y +55.7 / 88° +59.3 / 92° +66.7 / 100 +69.1 / 110 +68.7 / 120 +72.3 / 130

+22.1 / 60° +26.8 / 65° +33.8 / 70° +39.8 / 75° +43.2 / 80° +49.3 / 85° X +56.8 / 95° +65.7 / 105 +69.2 / 110

+22.7 / 60° +29.6 / 65° +38.7 / 70° +44.4 / 80°

X
+15.3 / 65° +21.2 / 70° +25.7 / 75° +31.9 / 80° +36.9 / 85° +45.6 / 95° +51.9 / 99° +68.7 / 100°

Λ
+20.4 / 65° +25.9 / 70° +31.6 / 75° +39.6 / 85 +48.6 / 95° +52.0 / 100 +58.3 / 110° +66.4 / 120° +70.8 / 130°

Back
+38.0 / 90° +44.3 / 100° +52.1 / 100 -60.3 / 120° +68.4 / 125° +74.1 / 130° +82.3 / 140° +84.9 / 145 +97.9 / 148°
100.1 / 153°
X

6+34°	C 0.0 / 00	+0.2 / 10°	−0.9 / 20°	00 / 28° (Begin of Rock.)	+2° / 30°	+3.6 / 40°	+8.5 / 50°	+10.8 / 60°	+17° / 70
6+5°	C 1.1 / 00	+1° / 10°	+0.2 / 20	00 / 25° (Begin of Rock.)	+0.6 / 30°	+4° / 40°	+8° / 50°	+10.6 / 60 (End of Rock.)	
7+00	C 2° / 00	+2.4 / 10°	+1° / 20°	+0.4 / 30° (Begin of Rock.)	+2.2 / 40°	+5° / 50°	+8° / 60°	+14.1 / 70° (End Rock.)	
7+50	Same as Frist Section								

$+\frac{33}{80}$ $+\frac{30}{90}$

$+\frac{17}{70}$ $+\frac{24}{80}$ $+\frac{31}{90}$ $+\frac{40}{100}$ $+\frac{49}{110}$ $+\frac{60}{1200}$ $+\frac{69}{130}$ $+\frac{79}{140}$ $+\frac{83}{145}$

$+\frac{97}{155}$ $+\frac{99}{150}$

$+\frac{185}{80}$ $+\frac{260}{90}$ $+\frac{315}{95}$ $+\frac{385}{100}$ $+\frac{421}{105}$ $+\frac{470}{110}$ $+\frac{521}{115}$ $+\frac{571}{120}$ $+\frac{601}{125}$

$+\frac{\text{[illegible]}}{150}$ $+\frac{777}{140}$ $+\frac{677}{130}$

Level Note. between

Sta.	+	H.I.	−	Rod
	4.48	13.046		
T-P.	4.71	13.266	4.49	
8293+25				1.35
8294+00				1.79
95+00				2.43
96+00				2.95
97+00				3.60
98+00				4.13
99+00				4.50
8300+00				4.55
01				4.70
02				4.70
03				4.80
04				4.75
T-P.	4.57	13.126.	4.71	
05				4.70
06				4.67
07				4.77
08				4.66
09				4.54
8310+00				4.62
11				4.65
12				4.65
TP	3.89	13.566	4.56	
13				4.12
14				4.15
15				4.22.

Eureka And Bairaird pt.

Elev	BM.		
	8.566		
	8.556		
	8.556		
	BM.		
	8.566		

12.566.

Sta.	+	H.I.	−	Rod
		12.566.		
8316+00				4.38
17				4.34
18				4.45
19				4.30
T-P.	3.30	11.616	4.25	
8320+00				3.35
21				3.25
22				3.25
23				3.14
24				3.34
25				3.25
26				3.10
27				3.15
28				3.22.
T-P.	2.44	10.906.	3.15	
29.				2.65
8330+00				2.72
31				2.76
32				2.59
33				2.60
34				2.45
35				2.40
36				2.50
T-P.	4.52	12.996	2.43	
37				4.41
38				4.20

Elev.	B.M.		
	8.316		
	8.466		
	8.476		

Sta.	+	H.I.	−	Rods
		12996		
39				3.98
8340+00				3.78
41				3.74
42				3.95
43				4.25
44				4.30
45				4.20
T-P	4.40	13236	4.16	
46				4.45
47				4.30
48				4.25
49				4.10
4350+00				3.86
51				3.89
52				3.75
53				3.68
54				3.68
T-P	3.33	12916	3.65	
55				3.60
56				3.69
57				3.76
58				3.61
59				3.46
8360+00				3.41
+36				3.95
8360+70				3.34

Elev.	B.M.		
	8.836		
	9.586		
			w end Trestk.
			cente. of Trest.

Sta.	H	H.I.	-	Rods
		12.916		
83 61+00				3.36
				3.35
62+00				3.50
63				3.90
64				4.25
T-P.	3.70	12.426	4.19	
65				3.95
			(359)	
66.				3.90
67				4.01
68				4.13
69.				4.09
T-P.	3.66	12.036	4.05	
83 70+00				3.63
71				3.60
72				3.77
73				3.72
74				3.77
75				3.67
76				3.55
77				355
T-P	3.81	12.396	3.50	
78				3.81
79				3.85
83 80+00				390
81				3.92

Elev	B.M.		
	8.726		
	WC. BM #67 8.705 8.736		
	8.376		
	8.536		

Sta	+	HI	−	Rods
		12.346		
82				3.89
83				3.95
84				3.90
85				3.95
T-P	3.77	12.211	3.905	
86				3.83
87				3.72
88				3.64
89				364
8390+00				361
91				3.61
92				3.55
93				3.50
T.P.	3.715	12.506	3.42	
94				3.77
95				3.77
96				3.63
97				3.41
98				3.39
99				3.50
8400+00				3.55
01				3.40
02				3.59
T-P.	3.27	12.266	3.51	
03				3.36
04				3.40

Elev.	BM.		
	8.441		
	8.791		
	8.996		

Sta	+	HI	−	Rods
		12.266		
05				3.42
06				3.53
07				3.49
08				3.55
09				3.64
T-P.	3.33	12.006	3.59	
8410+00				3.40
11				3.33
12				3.46
13				3.35
14				3.34
15				3.37
16				3.37
T-P.	3.12	11.811	3.315	
17				3.10
18				3.06
			(3.54)	
19				2.96
8420+00				3.01
21				3.11
22				3.25
23				3.30
24				3.43
T-P	4.08	12.515	3.36	
25				4.08
26				3.99

Elev.	BM.		
	8.676		
	8.691		
	WCBM = 8139 8.271		
	8.435		

Sta	+	HI	−	Rods
		12.515		
27				4.08
28				4.11
29				4.06
84.30				3.97
31				4.00
32				4.11
33				4.00
34				3.90
T-P	3.90	12.535	3.88	
35				3.94
36				3.91
37				3.99
38				4.00
39				3.99
84.40				3.91
41				3.94
42				4.00
43				4.05
44				4.09
T-P			4.00	

Elev	B.M.		
	8.635		
	8.535		

Level over Balloon Track.

Sta.	B.S.	H.I.	F.S.	Rods.
BM	5.55	13.624		
0+00 P.S.				4.80
0+50				4.80
1+00				4.83
+50				4.70
2+00				4.57
+50				4.75
T-P.	4.705	13.624	4.705	
3+00				4.69
+50				4.81
4+00				4.82
+50				4.84
5+00				5+00
+50				5.16
6+00				5.21
+50				5.06
7+00				5.05
T-P	3.70	12.344	4.98	
+50				3.86
8+00				3.81
+50				3.83
9+00				3.70
+50				3.82
10+00				3.85
+50				3.90
11+00				3.81
+50				3.73

Eureka. Oct 1, 1919
J F Lockhart

Elev.	B.M.	Taken on Topo ties
	8.074	
8.82		
8.82		
8.79		
8.92		
9.05		
8.87		
	8.919	
8.93		
8.81		
8.80		
8.78		
8.62		
8.46		
8.41		
8.56		
8.57		
	8644	
8.48		
8.53		
8.51		
8.64		
8.52		
8.49		
8.44		
8.53		
8.61		

Sta.	B.S.	H.I.	F.S.	Rods.
		12.314		
12+00				3.79
+50				3.80
13+00				3.56
T.P.	3.65	12.514	3.48	
+50				3.80
14+00				3.85
+50				3.86
15+00				3.87
+50				3.89
16+00				3.92
+50				3.81
17+00				4.15
+50				4.28
18+00				4.52
T-P.	2.21	10.274	4.45	
+50				2.58
19+00				2.96
+50				3.18
20+00				3.16
+50				3.35
21+00				3.36
+50				3.31
22+00				3.41
+50				3.49
23+00				3.46
T-P.	4.305	11.239	3.34	

Elev	B.M.		
8.55			
8.54			
8.79			
	8.864		
8.71			
8.66			
8.65			
8.64			
8.62			
8.59			
8.70			
8.36			
8.23			
7.99			
	8.064		
7.69			
7.31			
7.09			
7.11			
6.92			
6.91			
6.96			
6.86			
6.78			
6.81			
	6.939		

St	B.S.	HI	FS.	Rods
		11.239		
Culvert 23+289	On Lt. side			7.99
	On Rt. side			8.00
+50				4.36
24+00				4.30
+50				4.14
25+00				3.95
+50				3.86
26+00				3.72
+50				3.60
27+00				3.69
+50				3.79
28+00				3.76
T-P.	4.575	12.134	3.68	
+50				4.57
29+00				4.66
+50				4.72
30+00				4.66
+50				4.70
31+00				4.58
+50				4.50
32+00				4.50
T-P.	4.48	11.914	4.40	
+50				4.25
33+00				4.07
+50				3.89
34+00				3.84

Elev	BM.		
3.75		length = 21°	size = 1°x20
3.24			
6.88			
6.94			
7.10			
7.29			
7.38			
7.52			
7.64			
7.55			
7.45			
7.48			
	7.559		
7.56			
7.47			
7.41			
7.47			
7.43			
7.55			
7.63			
7.63			
	7.734		
7.66			
7.84			
8.02			
8.07			

Sta.	B.S	H.I	F.S.	Rods.
		17.919		
34+50				3.79
35+00				3.76
+50				3.76
36+00				3.65
T-P	4.06	13.919	3.555	
+50				4.08
37+00				4.14
+50				4.16
38+00				4.16
+50				4.11
39+00				4.02
+50				3.92
40+00				3.75
T-P	4.52	13.979	3.66	
+50				4.35
41+00				4.32
+50				4.50
42+00				4.35
+50				4.36
43+00				4.22
+50				4.39
44+00				4.27
+50				4.30
45+00				4.38
T-P	4.79	13.779	4.29	
+50				4.95

Elev	BM		
8.12			
8.15			
8.15			
8.26			
	8.359		
8.34			
8.28			
8.26			
8.26			
8.31			
8.40			
8.50			
8.67			
	8.759		
8.93			
8.96			
8.78			
8.93			
8.92			
9.06			
8.89			
9.01			
8.98			
8.90			
	8.949		
8.83			

Sta.	B.S.	H.I.	F.S.	Rds
		13.779		
95+57 & RS. =				196
0+89 L			4.705	

Elev.	BM		
8.82			
	8.074	BM.	

Level over Center

Sta.	B.S	H.I	F.S.	Rods
B.M.	6.025	16.651		
T-P	5.045	17.326	4.37	
T-P	5.445	19.081	3.69	
8249+ B.C.				5.3
8249+25				5.15
8249+00				4.96
8248+75				4.85
48+50				4.54
48+25				4.48
8248+01				4.40
47+75				4.26
47+50				4.20
47+30				4.10
T-P	4.805	20.086	3.80	
8247+00				4.98
46+75				4.98
46+48				4.92
46+25				4.90
8246+00				4.80
8245+77				4.81
45+62				4.76
45+47				4.79
45+32				4.86
45+17				4.85
45+02				4.86
T-P	4.45	19.506	4.725	
44+86				4.33

Line Stakes At Carson Tunnel

Oct 21, 1919

Elev.	B.M.		
	10.626		
	12.281		
	13.636		
13.78			
13.93		12.26	+ 1.67
14.12		12.29	+ 1.83 ✓
14.23		12.32	+ 1.91 ✓
14.54		12.35	+ 2.19 ✓
14.60		12.37	+ 2.23 ✓
14.68		12.40	+ 2.28 ✓
14.82		12.43	+ 2.39 ✓
14.88		12.46	+ 2.42 ✓
14.98		12.48	+ 2.50 ✓
	15.281		
15.10		12.51	+ 2.59 ✓
15.10		12.54	+ 2.56 ✓
15.16		12.57	+ 2.59 ✓
15.18		12.60	+ 2.58 ✓
15.28		12.62	+ 2.66 ✓
15.27		12.57	+ 2.70 ✓
15.32		12.54	+ 2.78 ✓
15.29		12.51	+ 2.78 ✓
15.22		12.48	+ 2.74 ✓
15.23		12.45	+ 2.78 ✓
15.22		12.42	+ 2.80 ✓
	15.361		
15.18		12.39	+ 2.79 ✓

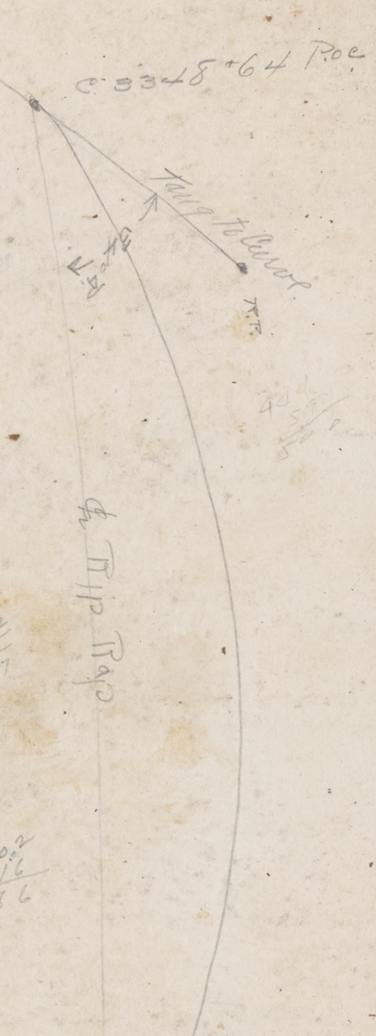
Sta	B.S.	HI	F.S.	Rods
		17.506		
44+72				4.39
44+57				4.30
44+42				4.33
44+27				4.48
44+12				4.31
43+97				4.58
43+82				4.62
43+67				4.83
43+52				4.80
43+37 CC				4.82
43+15				5.29
43+00				5.46
42+80				5.90
42+65				5.95
42+50				6.57
T.P.	4.005	17.421	6.09	
42+35				4.90
42+20				4.86
42+00				5.31
41+85				5.39
41+70				5.50
41+50				5.94
41+35				6.15
41+20				6.19
41+00				6.54

Elev.	B.M.		
15.12		12.36	+2 76 ✓
15.21		12.33	+2 88 ✓
15.18		12.30	+2 88 ✓
15.03		12.27	+2 76 ✓
15.20		12.24	+2 96 ✓
14.93		12.21	+2 72 ✓
14.89		12.18	+2 71 ✓
14.68		12.15	+2 53 ✓
14.71		12.12	+2 59 ✓
14.69		on Rail	
14.22		12.04	+2 18 ✓
14.05		12.02	+2 03 ✓
14.61		11.98	+2 63 ✓
13.56		11.95	+2 61 ✓
1294		11.92	+1 02 ✓
	13.416		
12.52		11.89	+0 63 ✓
12.56		11.86	+0 70 ✓
12.11		11.82	+0 29 ✓
1203		11.79	+0 24 ✓
11.92			
11.48			
11.27			
11.23			
10.88			

5+84
6+00
+50
7+25

9+46

P.I. 9+80



136.20
2.33
138.07

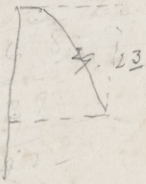
16.0
16.1
31.3
46.0
59.0

4.8
1.8
6.6
21.6
21.0
35.0
7.4
16.0
30.0
45.0
50.0

4.2
2.79

447.2
15
434.97

45.102
+16
44.86

15.281
4.805
20.086
4.725
15.361
4.146
19.506
6.096
13.410
4.2
17.4

10.626
6.025
16.651
4.37
12.281
5.045
17.326
3.69
13.636
6.44
19.080
5.481
3.80
15.281